

Title (en)

MOBILE BODY APPARATUS, EXPOSURE APPARATUS, AND DEVICE MANUFACTURING METHOD

Title (de)

MOBILE KÖRPERVORRICHTUNG, BELICHTUNGSVORRICHTUNG UND VORRICHTUNGSHERSTELLUNGSVERFAHREN

Title (fr)

APPAREIL DE CORPS MOBILE, APPAREIL D'EXPOSITION ET PROCÉDÉ DE FABRICATION DE DISPOSITIF

Publication

EP 3611572 A1 20200219 (EN)

Application

EP 19196657 A 20140626

Priority

- JP 2013135714 A 20130628
- EP 14816681 A 20140626
- JP 2014066919 W 20140626

Abstract (en)

A supporting member (25) on which a wafer table (WTB) is mounted is substantially kinematically supported, via six rod members (231 to 233, 241 to 243) placed on a slider (22). Further, coupling members (29) are placed facing in a noncontact manner via a predetermined gap, thin plate-shaped edges (25c) provided at both ends in the Y-axis direction of the supporting member (25). By this arrangement, vibration-damping is performed by the coupling members (29) (squeeze dampers) facing the edges (25c), on vibration of the supporting member (25) mounted on the wafer table (WTB). Further, because the supporting member (25) is kinematically supported via the plurality of rod members, it becomes possible to reduce deformation of the wafer table (WTB) that accompanies deformation of the slider (22).

IPC 8 full level

G03F 7/20 (2006.01); **H01L 21/027** (2006.01); **H01L 21/68** (2006.01)

CPC (source: EP KR US)

G03F 7/70716 (2013.01 - EP KR US); **G03F 7/70758** (2013.01 - KR US); **G03F 7/709** (2013.01 - EP KR US); **G03F 7/70991** (2013.01 - EP KR US); **H01L 21/68** (2013.01 - US); **H01L 21/68714** (2013.01 - US); **H01L 21/68742** (2013.01 - US)

Citation (applicant)

- US 2003025890 A1 20030206 - NISHINAGA HISASHI [JP]
- US 6452292 B1 20020917 - BINNARD MICHAEL [US]
- US 2010073653 A1 20100325 - SHIBAZAKI YUICHI [JP]
- US 7561280 B2 20090714 - SCHLUCHTER WILLIAM CLAY [US], et al
- US 2010296071 A1 20101125 - SHIBAZAKI YUICHI [JP]
- US 2008106722 A1 20080508 - SHIBAZAKI YUICHI [JP]
- US 2010297562 A1 20101125 - SHIBAZAKI YUICHI [JP]
- US 2009233234 A1 20090917 - SHIBAZAKI YUICHI [JP]
- US 5448332 A 19950905 - SAKAKIBARA YASUYUKI [JP], et al
- JP 2001325005 A 20011122 - FUJIMOTO HIROSHI
- US 5646413 A 19970708 - NISHI KENJI [JP]
- US 4780617 A 19881025 - UMATATE TOSHIKAZU [JP], et al
- US 7023610 B2 20060404 - OHTSUKI TOMOKO [US], et al
- US 6778257 B2 20040817 - BLEEKER ARNO JAN [NL], et al
- WO 0135168 A1 20010517 - MASSACHUSETTS INST TECHNOLOGY [US]
- US 6611316 B2 20030826 - SEWELL HARRY [US]
- WO 2011040642 A2 20110407 - NIPPON KOGAKU KK [JP], et al
- HIROSHI FUJIMOTO ET AL., TRANSACTIONS OF THE SOCIETY OF INSTRUMENT AND CONTROL ENGINEERS, vol. 36, no. 9, 2000, pages 766 - 772

Citation (search report)

- [A] US 2003098964 A1 20030529 - LEE MARTIN E [US], et al
- [A] US 2007292245 A1 20071220 - PHILLIPS ALTON H [US], et al
- [A] US 2011053061 A1 20110303 - SHIBAZAKI YUICHI [JP]
- [YD] US 2010297562 A1 20101125 - SHIBAZAKI YUICHI [JP]
- [Y] JP 2003324053 A 20031114 - NIKON CORP
- [Y] WO 2005036618 A1 20050421 - NIKON CORP [JP], et al

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 3038137 A1 20160629; EP 3038137 A4 20170719; EP 3038137 B1 20191030; CN 105493237 A 20160413; CN 105493237 B 20210709; CN 113359397 A 20210907; CN 113359397 B 20240227; EP 3611572 A1 20200219; EP 3611572 B1 20230405; EP 4194953 A1 20230614; HK 1220808 A1 20170512; JP 2019012832 A 20190124; JP 6384479 B2 20180905; JP 6718154 B2 20200708; JP WO2014208634 A1 20170223; KR 102014586 B1 20190826; KR 102342910 B1 20211223; KR 20160027048 A 20160309; KR 20190099101 A 20190823; TW 201510671 A 20150316; TW 201835690 A 20181001; TW I630463 B 20180721; TW I699626 B 20200721; US 10048598 B2 20180814; US 10353300 B2 20190716; US 10788760 B2 20200929; US 11181832 B2 20211123; US 2016170312 A1 20160616; US 2018321600 A1 20181108; US 2019310560 A1 20191010; US 2020401056 A1 20201224; WO 2014208634 A1 20141231

DOCDB simple family (application)

EP 14816681 A 20140626; CN 201480047670 A 20140626; CN 202110676405 A 20140626; EP 19196657 A 20140626; EP 23154155 A 20140626; HK 16108792 A 20160721; JP 2014066919 W 20140626; JP 2015524101 A 20140626; JP 2018149081 A 20180808; KR 20167002264 A 20140626; KR 20197024026 A 20140626; TW 103122037 A 20140626; TW 107120525 A 20140626; US 201414901543 A 20140626; US 201816032570 A 20180711; US 201916449977 A 20190624; US 202017011255 A 20200903